

Appl No.: 10/699,488
Reply to Office Action mailed September 06, 2007

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Atty. Dkt. No:
UCF-294DIV

DEC 03 2007

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1 – 7 (Canceled).

Claim 8 (Currently Amended). An apparatus for producing carbon nanoparticles comprising the components of:

(a) a container suitable for housing an electrochemical bath of an organic solution of methanol and benzyl alcohol disposed between two electrodes;

(b) an anode and a cathode coated with catalytic nanoparticles of iron and nickel as the electrodes in said container; and

(c) means a power supply for imposing a direct current potential of approximately 1000 volts between said electrodes to grow and deposit carbon nanoparticles from the organic solution under ambient conditions, on the electrodes in the electrochemical bath, [Support page 4, lines 11-14]

Claim 9 (Currently Amended). The apparatus according to Claim 8 wherein said means the power supply provides:

means power for imposing a current density of approximately 12 millamps per square centimeter between said electrodes for a time sufficient that carbon nanoparticles are developed on said electrodes.

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Claim 10 (Currently Amended). The apparatus according to Claim 8, wherein each of the carbon nanoparticles include:

a nanotube produced from the organic solution under ambient conditions having a diameter of up ranging from approximately 50 nm to approximately 100 nm.

Claim 11 (Currently Amended). The apparatus according to Claim 8, wherein each of the carbon nanoparticles include:

a nanotube produced from the organic solution under ambient conditions having a length of up from approximately 2 nm to approximately 50 μm[.]. [Support page 3, lines 11-14]

Claim 12 (New). The apparatus according to Claim 8, wherein the deposition of carbon nanoparticles is on the anode and the cathode coated with catalytic nanoparticles of iron and nickel.

Claim 13 (New). An apparatus for producing carbon nanoparticles comprising the components of:

(a) a container suitable for housing an electrochemical bath of an organic solution of methanol and

benzyl alcohol disposed between two electrodes;

(b) an anode and a cathode coated with catalytic nanoparticles of iron and nickel as the electrodes in said container; and

(c) a power supply for imposing a direct current potential of approximately 1000 volts between said electrodes wherein the power supply provides power for imposing a current density of

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approximately 12 millamps per square centimeter between said electrodes for a time sufficient to grow and deposit carbon nanoparticles from the organic solution under ambient conditions, on the electrodes in the electrochemical bath, wherein each of the carbon nanoparticles includes:

a nanotube produced from the organic solution under ambient conditions having a diameter ranging from approximately 50 nm to approximately 100 nm and a length ranging from approximately 2 nm to approximately 50 μ m.

Claim 14 (New). The apparatus according to Claim 13, wherein the organic solution consists of approximately 7% to approximately 40% methanol in solution with approximately 93% to approximately 60% benzyl alcohol.

Claim 15 (New). The apparatus according to Claim 13, wherein the ambient conditions include temperatures ranging from approximately 10 °C to approximately 80 °C, preferably approximately 15 °C to approximately 60 °C.

Claim 16 (New). The apparatus according to Claim 15, wherein the ambient conditions are temperatures ranging from approximately 20 °C to approximately 30 °C.

Claim 17 (New). The apparatus according to Claim 13, wherein the ambient conditions include ambient pressure of approximately one (1) atmosphere.